

WHAT IS CLAIMED IS:

1. A method of providing blood flow directly from a heart chamber to a coronary vessel, comprising:

providing a stent that includes a configuration having sufficient radial strength to resist deformation from contractile forces experienced during a cardiac cycle and sufficient flexibility in a compressed state and a deployed state to permit passage to a myocardial site and remain patent when implanted in the site;

delivering the stent in the compressed state into a passage at the myocardial site; and  
expanding the stent to deploy the stent in the passage.

2. The method of claim 1, wherein the stent includes a covering.

3. The method of claim 2, wherein the covering includes expandable PTFE.

4. The method of claim 2, wherein the covering covers substantially all of an inside surface and an outside surface of the stent.

5. The method of claim 2, wherein the stent includes a coating over the covering on an inside surface of the stent.

6. The method of claim 5, wherein the coating includes heparin.

7. The method of claim 5, wherein the coating is hemocompatible and antithrombogenic.

8. The method of claim 1, wherein the stent includes a covering having expandable PTFE that covers substantially all of an inside surface and an outside surface of the stent, and the stent includes a heparin-based coating over the covering on the inside surface of the stent.

9. The method of claim 1, wherein the stent includes a flared end.

10. The method of claim 9, wherein the flared end is placed in the passage to face the coronary vessel.

11. The method of claim 1, wherein the coronary vessel is a coronary artery.

12. The method of claim 1, wherein the heart chamber is a left ventricle.

13. The method of claim 1, wherein the myocardial site is distal to a coronary blockage.

14. The method of claim 13, wherein the coronary blockage is a partial blockage.

15. The method of claim 1, wherein delivering the stent includes delivering the stent percutaneously.

16. A method of providing blood flow directly from a left ventricle to a coronary artery, comprising:

providing a stent that includes a configuration having sufficient radial strength to resist deformation from contractile forces experienced during a cardiac cycle and sufficient flexibility in a compressed state and a deployed state to permit passage to a myocardial site distal to a coronary blockage and remain patent when implanted in the site, wherein the stent includes a covering having expandable PTFE that covers substantially all of an inside surface and an outside surface of the stent, and the stent includes an antithrombogenic coating over the covering on the inside surface of the stent;

delivering the stent percutaneously in the compressed state into a passage at the myocardial site; and

expanding the stent to deploy the stent in the passage.

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17. A method of providing blood flow directly from a heart chamber to a coronary vessel, comprising:

providing a stent that includes a configuration having sufficient radial strength to resist deformation from contractile forces experienced during a cardiac cycle and sufficient flexibility in a deployed state to permit passage to a myocardial site and remain patent when implanted in the site;

applying a covering to the stent;

applying a coating over the covering on an inside surface of the stent; and

delivering the stent into a passage at the myocardial site.

18. The method of claim 17, wherein delivering the stent includes percutaneously delivering the stent in a compressed state and expanding the stent to deploy the stent in the passage.

19. The method of claim 17, wherein the covering includes expandable PTFE.

20. The method of claim 17, wherein the covering covers substantially all of the inside surface and an outside surface of the stent.

21. The method of claim 17, wherein the coating includes heparin.

22. The method of claim 17, wherein the coating is hemocompatible and antithrombogenic.

23. The method of claim 17, wherein the stent includes a flared end.

24. The method of claim 23, wherein the flared end is placed in the passage to face the coronary vessel.

25. The method of claim 17, wherein the coronary vessel is a coronary artery.

26. The method of claim 17, wherein the heart chamber is a left ventricle.
27. The method of claim 17, wherein the myocardial site is distal to a coronary blockage.
28. The method of claim 27, wherein the coronary blockage is a partial blockage.
29. A conduit for providing blood flow directly from a heart chamber to a coronary vessel, comprising:
- a stent that includes a configuration having sufficient radial strength to resist deformation from contractile forces experienced during a cardiac cycle and sufficient flexibility in a compressed state and a deployed state to permit passage to a myocardial site and remain patent when implanted in the site; and
  - a covering applied to the stent.
30. The conduit of claim 29, wherein the covering includes expandable PTFE.
31. The conduit of claim 29, wherein the covering covers substantially all of an inside surface and an outside surface of the stent.
32. The conduit of claim 29, wherein the stent includes a coating over the covering on an inside surface of the stent.
33. The conduit of claim 32, wherein the coating includes heparin.
34. The conduit of claim 32, wherein the coating is hemocompatible and antithrombogenic.
35. The conduit of claim 29, wherein the covering includes expandable PTFE that covers substantially all of an inside surface and an outside surface of the stent, and the stent includes a heparin-based coating over the covering on an inside surface of the stent.

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36. The conduit of claim 29, wherein the stent includes a flared end.

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